Status: Path 1 of [Dialog Information Services via Modem]

Status: Initializing TCP/IP using (UseTelnetProto 1 ServiceID pto-dialog)
Trying 31060000009999...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
******** HHHHHHHH SSSSSSSS?
Status: Signing onto Dialog
****
ENTER PASSWORD:
******** HHHHHHHH SSSSSSSS? ********
Welcome to DIALOG
Status: Connected

Dialog level 03.00.02D

Last logoff: 11sep03 15:02:29
Logon file001 16sep03 09:49:42
*** ANNOUNCEMENT ***
***
--File 654 - US published applications from March 15, 2001 to the present are now online. Please see HELP NEWS 654 for details.

***
--File 581 - The 2003 annual reload of Population Demographics is complete. Please see Help News581 for details.

***
***
--File 990 - NewsRoom now contains February 2003 to current records. File 992 - NewsRoom 2003 archive has been newly created and contains records from January 2003. The oldest months's records roll out of File 990 and into File 992 on the first weekend of each month. To search all 2003 records BEGIN 990, 992, or B NEWS2003, a new OneSearch category.
***
--Connect Time joins DialUnits as pricing options on Dialog. See HELP CONNECT for information.
***
***
--SourceOne patents are now delivered to your email inbox as PDF replacing TIFF delivery. See HELP SOURCE1 for more information.
***
--Important news for public and academic libraries. See HELP LIBRARY for more information.
***
--Important Notice to Freelance Authors--
See HELP FREELANCE for more information
***
NEW FILES RELEASED
***World News Connection (File 985)
***Dialog NewsRoom - 2003 Archive (File 992)
***TRADEMARKSCAN-Czech Republic (File 680)
***TRADEMARKSCAN-Hungary (File 681)
***TRADEMARKSCAN-Poland (File 682)
***
UPDATING RESUMED
***
RELOADED
***Population Demographics -(File 581)
***CLAIMS Citation (Files 220-222)

REMOVED

```
                    ***

     >>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
     >>>    of new databases, price changes, etc.       <<<
                    ****
KWIC is set to 50.
HILIGHT set on as '*'

File   1:ERIC  1966-2003/Sep 11
       (c) format only 2003 The Dialog Corporation

      Set  Items  Description
      ---  -----  -----------
Cost is in DialUnits
?b 155, 5, 73
       16sep03 09:49:55 User259876 Session D545.1
            $0.33    0.094 DialUnits File1
     $0.33  Estimated cost File1
     $0.04  TELNET
     $0.37  Estimated cost this search
     $0.37  Estimated total session cost   0.094 DialUnits


SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R)  1966-2003/Sep W2
         (c) format only 2003 The Dialog Corp.
*File 155: Medline has been reloaded and accession numbers have
changed.  Please see HELP NEWS 155.
  File   5:Biosis Previews(R)  1969-2003/Sep W1
         (c) 2003 BIOSIS
  File  73:EMBASE  1974-2003/Sep W1
         (c) 2003 Elsevier Science B.V.

      Set  Items  Description
      ---  -----  -----------
?s (coacervate (w) microsphere?)
           460  COACERVATE
         46392  MICROSPHERE?
      S1       4  (COACERVATE (W) MICROSPHERE?)
?rd
...completed examining records
      S2       3  RD (unique items)
?t s2/3,k/all

 2/3,K/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

11771995   99210253   PMID: 10195878
  *Coacervate* *microspheres* as carriers of recombinant adenoviruses.
  Kalyanasundaram S; Feinstein S; Nicholson J P; Leong K W; Garver R I
  Department  of  Biomedical  Engineering,  Johns  Hopkins  University,
Baltimore, Maryland 21205, USA.
  Cancer gene therapy (UNITED STATES)  Mar-Apr 1999,  6  (2)  p107-12,
ISSN 0929-1903   Journal Code: 9432230
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: Completed

  *Coacervate* *microspheres* as carriers of recombinant adenoviruses.
  ...for bolus administration, both of which limit the efficiency of target
tissue infection. As a first step toward overcoming these limitations, rAds
were encapsulated in *coacervate* *microspheres* comprised of gelatin and
alginate followed by stabilization with calcium ions. Ultrastructural
evaluation showed that the microspheres formed in this manner were 0.8-10
...
```

... adenovirus-containing microspheres to human tumor nodules engrafted in mice showed that the viral transgene was transferred to the tumor cells. It is concluded that *coacervate* *microspheres* can be used to encapsulate bioactive rAd and release it in a time-dependent manner.

2/3,K/2 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11326624 BIOSIS NO.: 199800107956
Recombinant adenovirus can be encapsulated and released from *coacervate* *microspheres* in a time-dependent fashion.
AUTHOR: Kalyanasundaram S(a); Feinstein Sharon; Nicholson J P; Leong K W(a); Garver R I Jr
AUTHOR ADDRESS: (a)Johns Hopkins Univ., Dep. Biomed. Eng., Baltimore, MD** USA
JOURNAL: Cancer Gene Therapy 4 (6 CONF. SUPPL.):pS23 Nov.-Dec., 1997
CONFERENCE/MEETING: Sixth International Conference on Gene Therapy of Cancer San Diego, California, USA November 20-22, 1997
ISSN: 0929-1903
RECORD TYPE: Citation
LANGUAGE: English

Recombinant adenovirus can be encapsulated and released from *coacervate* *microspheres* in a time-dependent fashion.
MISCELLANEOUS TERMS: *coacervate* *microspheres*;

2/3,K/3 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

06956690 EMBASE No: 1997241258
***Coacervate* *microspheres* as vaccination vehicles**
Azhari R.; Danino E.; Kasuto H.; Kushnir A.; Kothliarevski L.; Levin D.
R. Azhari, Dept. of Biotechnology, Ort Braude College, Karmiel, 20101 Israel
Proceedings of the Controlled Release Society (PROC. CONTROL. RELEASE SOC.) (United States) 1997, -/24 (821-822)
CODEN: 58GMA ISSN: 1022-0178
DOCUMENT TYPE: Journal; Conference Paper
LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 8

***Coacervate* *microspheres* as vaccination vehicles**
?ds

Set	Items	Description
S1	4	(COACERVATE (W) MICROSPHERE?)
S2	3	RD (unique items)

?s (coacervate) (s) (vector or virus or adenovirus)

	460	COACERVATE
	211153	VECTOR
	1201225	VIRUS
	64465	ADENOVIRUS
S3	4	(COACERVATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)

?rd
...completed examining records

S4	3	RD (unique items)

?t s4/3,k/all

4/3,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11771995 99210253 PMI[redacted]10195878
Coacervate microspheres as carriers of recombinant adenoviruses.
Kalyanasundaram S; Feinstein S; Nicholson J P; Leong K W; Garver R I
Department of Biomedical Engineering, Johns Hopkins University, Baltimore, Maryland 21205, USA.
Cancer gene therapy (UNITED STATES) Mar-Apr 1999, 6 (2) p107-12,
ISSN 0929-1903 Journal Code: 9432230
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

...for bolus administration, both of which limit the efficiency of target tissue infection. As a first step toward overcoming these limitations, rAds were encapsulated in *coacervate* microspheres comprised of gelatin and alginate followed by stabilization with calcium ions. Ultrastructural evaluation showed that the microspheres formed in this manner were 0.8-10 microM in diameter, with viruses evenly distributed. The microspheres achieved a sustained release of *adenovirus* with a nominal loss of bioactivity. The pattern of release and the total amount of *virus* released was modified by changes in microsphere formulation. Administration of the *adenovirus* -containing microspheres to human tumor nodules engrafted in mice showed that the viral transgene was transferred to the tumor cells. It is concluded that *coacervate* microspheres can be used to encapsulate bioactive rAd and release it in a time-dependent manner.

4/3,K/2 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12481942 BIOSIS NO.: 200000235444
Antigen-specific induction of peripheral T cell tolerance in vivo by codelivery of DNA vectors encoding antigen and Fas ligand.
AUTHOR: Georgantas Robert W III(a); Leong Kam W; August J Thomas
AUTHOR ADDRESS: (a)725 North Wolfe Street, Room 311, Biophysics Building, Baltimore, MD, 21205**USA
JOURNAL: Human Gene Therapy 11 (6):p851-858 April 10, 2000
ISSN: 1043-0342
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

METHODS & EQUIPMENT: DNA-gelatin *coacervate*----

...DNA transfer method, *vector*;

4/3,K/3 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11326624 BIOSIS NO.: 199800107956
Recombinant *adenovirus* can be encapsulated and released from *coacervate* microspheres in a time-dependent fashion.
AUTHOR: Kalyanasundaram S(a); Feinstein Sharon; Nicholson J P; Leong K W(a); Garver R I Jr
AUTHOR ADDRESS: (a)Johns Hopkins Univ., Dep. Biomed. Eng., Baltimore, MD** USA
JOURNAL: Cancer Gene Therapy 4 (6 CONF. SUPPL.):pS23 Nov.-Dec., 1997
CONFERENCE/MEETING: Sixth International Conference on Gene Therapy of Cancer San Diego, California, USA November 20-22, 1997
ISSN: 0929-1903
RECORD TYPE: Citation
LANGUAGE: English

Recombinant *adenovirus* [redacted]n be encapsulated and released [redacted]om *coacervate* microspheres in a time-dependent fashion.

```
?ds

Set     Items   Description
S1          4   (COACERVATE (W) MICROSPHERE?)
S2          3   RD (unique items)
S3          4   (COACERVATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)
S4          3   RD (unique items)
?s (coacervate) and (vector or virus or adenovirus)
            460  COACERVATE
         211153  VECTOR
        1201225  VIRUS
          64465  ADENOVIRUS
      S5        4  (COACERVATE) AND (VECTOR OR VIRUS OR ADENOVIRUS)
?rd
...completed examining records
      S6        3  RD (unique items)
?s s6not s4
      S7        0  S6NOT S4
?s (gelatin and alginate) (s) (vector or viurs or adenovirus)
           31878  GELATIN
           12647  ALGINATE
          211153  VECTOR
              72  VIURS
           64465  ADENOVIRUS
      S8        4  (GELATIN AND ALGINATE) (S) (VECTOR OR VIURS OR
                   ADENOVIRUS)
?rd
...completed examining records
      S9        2  RD (unique items)
?t s9/3,k/all
```

9/3,K/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

15172425 22696682 PMID: 12812957

Alginate for endovascular treatment of aneurysms and local growth factor delivery.

Raymond Jean; Metcalfe Annick; Desfaits Anne-Cecile; Ribourtout Edith; Salazkin Igor; Gilmartin Kevin; Embry Gill; Boock Robert J
Interventional Neuroradiology Laboratory, CHUM Research Center, Notre-Dame Hospital, 1560 Sherbrooke East, Suite M-8203, Montreal, Quebec, Canada H2L 4M1.

AJNR. American journal of neuroradiology (United States) Jun-Jul 2003, 24 (6) p1214-21, ISSN 0195-6108 Journal Code: 8003708
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: In Process

BACKGROUND AND PURPOSE: Coil embolization is safe and effective but may be followed by aneurysm recurrence. Our purpose was to explore the use of *alginate* as a new embolic agent that could deliver growth factors and improve results of endovascular treatment of aneurysms. METHODS: We first assessed the potential of *alginate* as a *vector* for growth factor delivery by using in vitro binding and elution studies. Lateral wall (n = 68) and bifurcation (n = 4) aneurysms were then constructed in six pigs and 36 dogs. We explored iodine-125 transforming growth factor-beta(1) in vivo *alginate* delivery in 16 canine aneurysms. We next assessed the effects of adding *alginate* to *gelatin* sponges on angiographic and pathologic results at 3 weeks (n = 4 each) in an established model used for the study of recanalization and recurrence. We then explored techniques to control endovascular *alginate* delivery without protection (n = 4), with the protection of a balloon (n = 4), and with the protection of a single coil (n = 12) at the aneurysm neck in 12 porcine aneurysms, four canine lateral

wall aneurysms, and f[redacted] canine bifurcation aneurysms[redacted]he stability of cross-linked *alginate* was studied after intraoperative injections in eight aneurysms. Finally, to determine the value of the material with or without growth factor in promoting aneurysm healing, we compared angiographic results and neointima formation 3 weeks after intraoperative embolization of canine lateral wall aneurysms with *alginate* blocks with or without platelet-derived growth factor-BB or transforming growth factor-beta(1) (n = 5 each). RESULTS: Growth factors rapidly eluted from *alginate* in vitro and in vivo. *Alginate* coating of sponges led to improved angiographic results and thick neointima formation. Intraoperative *alginate* block embolization did not lead to recurrence, and growth factors delivered with *alginate* did not show added benefits. Endovascular *alginate* embolization was complicated by carotid emboli, and the polymer was unstable once injected, causing delayed neurologic deficits. CONCLUSION: Growth factor delivery can be performed with *alginate*, but formulation changes and improved endovascular control are necessary before contemplating its use in intracranial aneurysms.

9/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11771995 99210253 PMID: 10195878
Coacervate microspheres as carriers of recombinant adenoviruses.
Kalyanasundaram S; Feinstein S; Nicholson J P; Leong K W; Garver R I
Department of Biomedical Engineering, Johns Hopkins University, Baltimore, Maryland 21205, USA.
Cancer gene therapy (UNITED STATES) Mar-Apr 1999, 6 (2) p107-12,
ISSN 0929-1903 Journal Code: 9432230
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

... of which limit the efficiency of target tissue infection. As a first step toward overcoming these limitations, rAds were encapsulated in coacervate microspheres comprised of *gelatin* and *alginate* followed by stabilization with calcium ions. Ultrastructural evaluation showed that the microspheres formed in this manner were 0.8-10 microM in diameter, with viruses evenly distributed. The microspheres achieved a sustained release of *adenovirus* with a nominal loss of bioactivity. The pattern of release and the total amount of virus released was modified by changes in microsphere formulation. Administration of the *adenovirus*-containing microspheres to human tumor nodules engrafted in mice showed that the viral transgene was transferred to the tumor cells. It is concluded that coacervate...
?ds

Set	Items	Description
S1	4	(COACERVATE (W) MICROSPHERE?)
S2	3	RD (unique items)
S3	4	(COACERVATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)
S4	3	RD (unique items)
S5	4	(COACERVATE) AND (VECTOR OR VIRUS OR ADENOVIRUS)
S6	3	RD (unique items)
S7	0	S6NOT S4
S8	4	(GELATIN AND ALGINATE) (S) (VECTOR OR VIURS OR ADENOVIRUS)
S9	2	RD (unique items)

?s (polycation? and polyanion?) (s) (vector or virus or adenovirus)

	5958	POLYCATION?
	6751	POLYANION?
	211153	VECTOR
	1201225	VIRUS
	64465	ADENOVIRUS
S10	64	(POLYCATION? AND POLYANION?) (S) (VECTOR OR VIRUS OR ADENOVIRUS)

```
?s s10 and (microsphere?
            64  S10
         46392  MICROSPHERE?
   S11       0  S10 AND (MICROSPHERE?)
?s s10 and (encapsulated or encapsulate)
            64  S10
         27902  ENCAPSULATED
          1218  ENCAPSULATE
   S12       0  S10 AND (ENCAPSULATED OR ENCAPSULATE)
?rd s10
...examined 50 records  (50)
...completed examining records
   S13      32  RD S10 (unique items)
?s s13 not py>1998
            32  S13
       6873407  PY>1998
   S14      26  S13 NOT PY>1998
?s s14 and (gene (w) delivery)
            26  S14
       2098574  GENE
        392382  DELIVERY
         11556  GENE(W)DELIVERY
   S15       0  S14 AND (GENE (W) DELIVERY)
?t s14/3,k/all
```

14/3,K/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

11763254 99200998 PMID: 10099202

The primary production of an infectious recombinant Herpes Simplex Virus vaccine.

O'Keeffe R; Johnston M D; Slater N K

Department of Chemical Engineering & Applied Chemistry, Aston University, Aston Triangle, Birmingham, United Kingdom.

Biotechnology and bioengineering (UNITED STATES) Feb 5 1998, 57 (3) p262-71, ISSN 0006-3592 Journal Code: 7502021

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The production and extracellular release of a recombinant Herpes Simplex *Virus* (type 2) from monolayers of infected complementing Vero cells (CR2) are addressed. Growth and *virus* production conditions are identified that provide adequate *virus* titers with cell seeding densities and viral multiplicities of infection that could be reasonably handled in manufacturing. Harvesting by sonication of cell monolayers is shown to give the highest recovery of infectious *virus* (to 2.5 x 10(6) pfu/mL) but leads to process stream contamination by cellular proteins through the rupturing of cells (to 28 pg protein/pfu). By comparison, freeze-thaw cycles and osmotic rupture by hypotonic saline or glycerol shock procedures yield only low *virus* recovery (typically <10% of that by sonication), and are accompanied by yet higher levels of protein contamination (up to 30-fold higher pg protein/pfu). Addition of the *polyanionic* polymers, heparin or dextran sulphate to a harvest using either hypotonic saline, glycerol shock or isotonic phosphate buffered saline increased the yield of infectious *virus* in the supernatant. By contrast, addition of *polycationic* poly-L-lysine resulted in negligible increase in the supernatant *virus* titer. The highest *virus* titers (4.7 x 10(7) pfu/mL) were achieved following treatment of roller bottle cultured cells displaying a high cytopathic effect with heparin at...

... least 3 h post harvest. This procedure also gave the lowest levels of protein contamination (<2 pg protein/pfu). The fivefold lower yield of infectious *virus* from cultures displaying a low cytopathic effect (<70% CPE) indicates the importance of cell physiological state at harvest.

14/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11336744 98216721 PMID: 9557643
Human immunodeficiency virus type 1 attachment to HeLa CD4 cells is CD4 independent and gp120 dependent and requires cell surface heparans.
Mondor I; Ugolini S; Sattentau Q J
Centre d'Immunologie de Marseille-Luminy, Marseille, France.
Journal of virology (UNITED STATES) May 1998, 72 (5) p3623-34, ISSN 0022-538X Journal Code: 0113724
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The binding of human immunodeficiency *virus* type 1 (HIV-1) (Hx10) virions to two different cell lines was analyzed by using a novel assay based on the detection, by anti-HLA-DR-specific antibodies, of HLA-DR+ *virus* binding to HLA-DR- cells. Virion attachment to the CD4+-T-cell line A3.01 was highly CD4 dependent in that it was potently inhibited by CD4 monoclonal antibodies (MAbs), and little *virus* binding to the CD4- sister A2.01 line was observed. By contrast, virion binding to HeLa cells expressing moderate or high levels of CD4 was...
... neutralized infectivity on HeLa-CD4 cells. HIV-1 attachment to HeLa cells was only partially inhibited by MAbs specific for adhesion molecules present on the *virus* or target cells but was completely blocked by *polyanions* such as heparin, dextran sulfate, and pentosan sulfate. Treatment of HeLa-CD4 cells with heparinases completely eliminated HIV attachment and infection, strongly implicating cell surface...

14/3,K/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10870119 97221747 PMID: 9068793
***Polycations* increase the efficiency of *adenovirus*-mediated gene transfer to epithelial and endothelial cells in vitro.**
Arcasoy S M; Latoche J D; Gondor M; Pitt B R; Pilewski J M
Department of Medicine, Univeristy of Pittsburgh School of Medicine, PA, USA.
Gene therapy (ENGLAND) Jan 1997, 4 (1) p32-8, ISSN 0969-7128 Journal Code: 9421525
Contract/Grant No.: HL 32154; HL; NHLBI
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

***Polycations* increase the efficiency of *adenovirus*-mediated gene transfer to epithelial and endothelial cells in vitro.**
... the initial interactions between adenoviruses and the target cell. To address the hypothesis that the negative charge presented by membrane glycoproteins reduces the efficiency of *adenovirus* -mediated gene transfer, primary cultures of human airway, Madin-Darby canine kidney cells, an immortalized cystic fibrosis airway epithelial cell line, and primary cultures of sheep pulmonary artery endothelium were infected with recombinant *adenovirus* containing the E. coli lacZ reporter gene (Ad2 beta gal2) in the presence of various polyions. For each cell type, adsorption of Ad2 beta gal2 in the presence of the *polycations* polybrene, protamine, DEAE-dextran, and poly-L-lysine significantly increased the percentage of cells that express lacZ. The *polyanion* heparin did not significantly alter gene transfer efficiency, but completely abrogated the

effects of *polycations*. These data provide evidence that negatively charged moieties on the cell surface reduce the efficiency of *adenovirus* -mediated gene transfer, and that alteration of the charge interaction between adenoviruses and the cell surface may improve the potential clinical application of these vectors.

14/3,K/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10789565 97139851 PMID: 8986433
Optimized galenics improve in vitro gene transfer with cationic molecules up to 1000-fold.
Boussif O; Zanta M A; Behr J P
Laboratoire de Chimie Genetique associe au CNRS, Universite Louis Pasteur, Faculte de Pharmacie, Illkirch, France.
Gene therapy (ENGLAND) Dec 1996, 3 (12) p1074-80, ISSN 0969-7128 Journal Code: 9421525
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Reproducible and optimized complex formation between *polyanionic* DNA and a *polycationic* *vector* is a key aspect of nonviral gene transfer systems. To this end, several factors relevant to in vivo delivery have been tested repeatedly on several...

14/3,K/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08135881 94201750 PMID: 7512117
Localization of a functional site on herpes simplex virus type 1 glycoprotein C involved in binding to cell surface heparan sulphate.
Trybala E; Bergstrom T; Svennerholm B; Jeansson S; Glorioso J C; Olofsson S
Department of Clinical Virology, University of Goteborg, Sweden.
Journal of general virology (ENGLAND) Apr 1994, 75 (Pt 4) p743-52, ISSN 0022-1317 Journal Code: 0077340
Contract/Grant No.: GM34534; GM; NIGMS
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The amino acid residues critical for interaction between herpes simplex *virus* type 1 (HSV-1) glycoprotein C (gC-1) and cell surface heparan sulphate (HS) were localized to two separate regions within antigenic site II of...

... following observations. (i) Monoclonal antibodies defining gC-1 antigenic site II, and not those reactive with antigenic site I, inhibited HSV-1-induced haemagglutination and *virus* binding to susceptible cells. (ii) A number of HSV-1 mar mutants, altered at these critical residues, were impaired in attachment to cells. (iii) Synthetic peptides, corresponding to these two regions inhibited *virus* attachment to cells and infectivity. In addition these peptides were found to agglutinate red blood cells. This agglutination was inhibited by soluble HS, and was...

... the pretreatment of red blood cells with heparitinase suggesting that cell surface HS was a site of peptide binding. The same was observed with the *polycationic* substances neomycin and poly-L-lysine. In conclusion, we propose that the regions of gC-1 represented by the HS-binding peptides may form a functional site of a *polycationic* nature, active in attachment to

the *polyanionic* glycosaminoglycan chain of cell surface

14/3,K/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07564531 93019458 PMID: 1328555
Effect of biological and synthetic polymers on BK virus infectivity and hemagglutination.
Sinibaldi L; Pietropaolo V; Goldoni P; Di Taranto C; Orsi N
Istituto Pasteur, Fondazione Cenci Bolognetti, Rome, Italy.
Journal of chemotherapy (Florence, Italy) (ITALY) Feb 1992, 4 (1) p16-22, ISSN 1120-009X Journal Code: 8907348
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The effect of several biological and synthetic polymers, chosen on the basis of different physical and chemical properties, was investigated on BK *virus* infectivity and hemagglutination. It was observed that *polyanions* like mucin, dextran sulfate and heparin depressed the viral binding, whereas *polycations* had no significant activity, with the exception of poly-L-lysine, which enhanced it. The effect of the active polymers was studied in different experimental conditions and the results obtained suggested that *polyanions* may act directly on the *virus* particle, whereas the target of *polycations* could be at the level of cell membranes. However, the effect shown by the active compounds did not appear to be simply related to the electric charge since neutral compounds, such as tamarind gum and locust bean gum, showed a marked inhibitory effect on BK *virus* binding to the cells.

14/3,K/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07349013 92212172 PMID: 1556956
Effect of electric charged molecules on Sindbis virus hemagglutination and hemolysis.
Mastromarino P; Conti C; Petruzziello C; Lapadula R; Orsi N
Institute of Microbiology, School of Medicine, University of Rome La Sapienza, Italy.
Microbiologica (ITALY) Jan 1992, 15 (1) p23-8, ISSN 0391-5352 Journal Code: 7902903
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The role of electrostatic interactions in the attachment and fusion at acidic pH of Sindbis *virus* (SNV) with goose erythrocytes was studied, investigating the effect of several anionic and cationic polyelectrolytes on SNV hemagglutination and hemolysis. In order to establish the target of active drugs, the compounds were incubated either with the *virus* particles or with the erythrocytes. Dextran sulfate was the only compound able to inhibit the attachment of SNV to the erythrocytes. Fusion of *virus* with red cells was reduced dose-dependently by the *polyanions* dextran sulfate, mucin and polygalacturonic acid. On the contrary two *polycations*, polylysine and polybrene, enhanced viral hemolytic activity. However the effect of polyions is not exclusively related to the electric charge since ineffective molecules were found...

14/3,K/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07239754 92102346 PMID: 1759905

Effect of polyions on the early events of Sindbis virus infection of Vero cells.

Mastromarino P; Conti C; Petruzziello R; Lapadula R; Orsi N
Institute of Microbiology, School of Medicine, University of Rome La Sapienza, Italy.

Archives of virology (AUSTRIA) 1991, 121 (1-4) p19-27, ISSN 0304-8608 Journal Code: 7506870
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

To clarify the role of electrostatic interactions in the binding of Sindbis *virus* (SNV) to cell membrane receptors, we investigated the effect of different polyions on the initial steps of infection of Vero cells by the *virus*. Several *polyanions* (mucin, heparin, polygalacturonic acid) and *polycations* (polylysine, protamine, polybrene) were able to reduce the replication of SNV when present in the viral adsorption period, whereas others (chondroitin sulfate, polymyxin B sulfate ...
... any activity. Therefore the electric charge alone is not sufficient to explain the action of compounds. The effects of polyions on receptor binding, on bound *virus*, and on internalized *virus* have been examined. All the drugs inhibited SNV infection by affecting its binding to the cellular receptor. The results indicated that heparin and mucin act directly on the *virus* particle while *polycations* bind to the cell membrane receptor for the *virus* , protamine being effective on both targets. Since among *polyanions* glycosaminoglycans showed a strong inhibiting activity, the involvement of these molecules in the *virus* surface receptor was assessed by enzyme digestion of cell membrane with heparinase and chondroitin ABC lyase.

14/3,K/9 (Item 9 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

07030794 91271656 PMID: 1647050

Electrostatic interactions in the early events of VSV infection.

Conti C; Mastromarino P; Riccioli A; Orsi N
Institute of Microbiology, School of Medicine, University of Rome, La Sapienza.

Research in virology (FRANCE) Jan-Feb 1991, 142 (1) p17-24, ISSN 0923-2516 Journal Code: 8907469
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The importance of electrostatic interactions in the early phases of vesicular stomatitis *virus* (VSV) infection has been investigated in susceptible cells of different origin, human (HeLa) and avian (CER), by using some *polyanions* (heparin, polygalacturonic acid and mucin) and *polycations* (polymyxin B sulphate, poly-L-lysine, protamine, histone and polybrene). In HeLa cells, the attachment of VSV was enhanced by polymers having a positive charge and inhibited by those having a negative charge. In CER cells, all the *polyanions* tested reduced *virus* infection. Among the *polycations*, histone, polymyxin B sulphate and poly-L-lysine enhanced *virus* plaque formation while protamine and polybrene reduced *virus* attachment. The effect of polyions on VSV particles and on cell membrane receptors has also been investigated. The analysis of the results obtained suggest that...

14/3,K/10 (Item 10 [redacted] file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

06784953 91024455 PMID: 2171447
In vitro and in vivo effect of heparin, chondroitin, dextran and protamine on the virulence of pseudorabies virus (Suid herpesvirus 1).
Ramos-Kuri M; Kretschmer R R; Espinosa-Larios E L; Aguilar-Setien A
Division de Inmunologia, Centro Medico Nacional Instituto Mexicano del Seguro Social, Mexico, D.F.
Archivos de investigacion medica (MEXICO) Jan-Mar 1990, 21 (1) p29-33, ISSN 0066-6769 Journal Code: 0262036
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The possible antiherpetic effect of three *polyanions* (heparin, chondroitin sulfate and dextran sulfate), as well as one *polycation* (protamine sulfate) was tested in vitro and in vivo against pseudorabies *virus* (Suid herpesvirus 1). The in vitro experiments revealed that heparin, dextran sulfate and protamine sulfate significantly reduced the number of lytic plaques. Chondroitin sulfate only caused a decrease in mean plaque size. Experiments in vivo disclosed that heparin injected subcutaneously before the experimental infection, was the only *polyanion* that protected mice against pseudorabies *virus*. Protamine sulfate had a paradoxic effect: whereas in vitro it reduced the number of lytic plaques, in vivo it increased the lethality of pseudorabies *virus*. Chondroitin sulfate and dextran sulfate did not modify the virulence of the *virus* in mice.

14/3,K/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

05718753 88072036 PMID: 2825398
Transmissible gastroenteritis (TGE) of swine: in vitro *virus* attachment and effects of *polyanions* and *polycations*.
Nguyen T D; Bottreau E; Aynaud J M
National Institute of Veterinary Research, Bachmai, Hanoi, Vietnam.
Veterinary microbiology (NETHERLANDS) Sep 1987, 14 (4) p343-54, ISSN 0378-1135 Journal Code: 7705469
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Transmissible gastroenteritis (TGE) of swine: in vitro *virus* attachment and effects of *polyanions* and *polycations*.

14/3,K/12 (Item 12 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

05427791 87106381 PMID: 3542643
Effects of heparin on insulin binding and biological activity.
Kriauciunas K M; Grigorescu F; Kahn C R
Diabetes (UNITED STATES) Feb 1987, 36 (2) p163-8, ISSN 0012-1797 Journal Code: 0372763
Contract/Grant No.: AM-31036; AM; NIADDK; AM-33201; AM; NIADDK
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The effect of heparin, a *polyanionic* glycosaminoglycan known to alter the function of many proteins, on insulin binding and bioactivity was studied. Cultured human lymphocytes (IM-9) were incubated with varying...

... with heparinized plasma or heparinized serum but not when cells were incubated with normal serum or plasma from blood anticoagulated with EDTA. By contrast, other *polyanions* and *polycations*, e.g., poly-L-glutamic acid, poly-L-lysine, succinylated poly-L-lysine, and histone, did not inhibit binding. Heparin also inhibited insulin binding in Epstein-Barr (EB) *virus* -transformed lymphocytes but had no effect on insulin binding to isolated adipocytes, human erythrocytes, or intact hepatoma cells. When isolated adipocytes were incubated with heparin...

14/3,K/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03719603 82130839 PMID: 6173955

Effects of high molecular weight *polycation* and *polyanion* in the mechanical inoculation of tobacco mosaic *virus* (author's transl)]

Kajita S; Matsui C

Uirusu. Journal of virology (JAPAN) Jun 1981, 31 (1) p33-9, ISSN 0042-6857 Journal Code: 0417475
Document type: Journal Article ; English Abstract
Languages: JAPANESE
Main Citation Owner: NLM
Record type: Completed

Effects of high molecular weight *polycation* and *polyanion* in the mechanical inoculation of tobacco mosaic *virus* (author's transl)]

14/3,K/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03345399 81035582 PMID: 6448527

[The influence of artificial infrared radiation and microwaves upon mucopolysaccharides, protamine sulphate, and mucin in virus-infected organ cultures (author's transl)]

Einfluss von kunstlich erzeugten Infrarotstrahlen und Mikrowellen auf Mucopolysaccharide, Protaminsulfat und Mucin in virus-infizierten Organkulturen.

Henneberg G; Heller S; Jordanski H

Zentralblatt fur Bakteriologie. 1. Abt. Originale. A- Medizinische Mikrobiologie, Infektionskrankheiten und Parasitologie (GERMANY, WEST) Mar 1980, 246 (2) p167-83, ISSN 0172-5599 Journal Code: 8005748
Document type: Journal Article ; English Abstract
Languages: GERMAN
Main Citation Owner: NLM
Record type: Completed

Infrared radiation and 1-2 micron microwaves influenced the infectivity of Newcastle Disease *Virus* (NDV) upon chick embryo tracheal tissue in such a way that the expected destruction of ciliated epithelium turned out to be incomplete or did not...
...of the mucous membrane of the respiratory tract a study was performed in order to establish the radiation influence on mediator substances involved in the *virus* infection of mucous membranes. The mucopolysaccharides, chondroitine sulphate and hyaluronic acid, as well as mucin served as models; in addition protamine sulphate was used for...

... influence of the above substances upon NDV-infection in organ cultures and the effect of electromagnetic waves upon such influence were studied. By choosing a *virus* concentration of 10(-8)/ml on chick embryo tracheal tissue it was established that the application of infrared radiation (Osram

Siccatherm Infrared Radiator,- 1-2 micron) and cm-waves (Klystron Raytheon Comp. Mass. USA, - 1.25 cm) for a length of 10 min. inhibited Newcastle Disease *Virus* (NDV) infectivity. The suspension fluid was treated with infrared and the tissue with cm-waves. Previous experiments revealed that direct radiation influence upon viruses cannot be taken for granted which is why the agents, chondroitine sulphate (*polyanion*) 5-10 microgram/ml, and hyaluronic acid (*polyanion*) 10-50 microgram/ml, were used in order to study such influence upon NDV-infected tracheal mucous membrane. In addition, protamine sulphate (*polycation*), 5-10 microgram/ml, and mucin were used. All the above mentioned substances influenced viral infectivity in organ cultures-expressed in terms of quotients: quotient...
... motility of the ciliated mucous membrane cells and quotient 0.01 means the complete destruction of the cells. Chondroitine sulphate inhibited strong but promoted weak *virus* infectivity, hyaluronic acid inhibited strong *virus* infectivity, protamine sulphate inhibited strong but promoted weak *virus* infectivity and mucin promoted weak *virus* infectivity in accordance with the used *virus* concentrations (Table 2). Under the influence of infrared radiation the mediator substances exercised a different influence upon viral infectivity: 25 times out of 32 experiments...

14/3,K/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03077162 79255075 PMID: 224843
[Swine cell sublines with different ploidies. III. Susceptibility to foot-and-mouth disease virus]
Sublinhagens celulares suinas com ploidias diferentes. III -- Susceptibilidade ao virus da febre aftosa.
Koseki I
Arquivos do Instituto Biologico (BRAZIL) Oct-Dec 1978, 45 (4) p261-71, ISSN 0020-3653 Journal Code: 7505232
Document type: Journal Article ; English Abstract
Languages: PORTUGUESE
Main Citation Owner: NLM
Record type: Completed

IB-RS-10-II subline with tetraploid level cells was more susceptible to the infection by the foot-and-mouth disease *virus* (FMDV) ASQ-PG strain than IB-RS-10-I subline with diploid level cells, when number and size of plaques and cytopathogenic effect of the *virus* were used as criteria. Besides, the *virus* yield in one-cycle of infection was almost the double in IB-RS-10-II than IB-RS-10-I cell subline and the near-tetraploid cells were more susceptible to be infected by the *virus* than the near-diploid cells. However, in relation to FMDV ASQ-Pp strain the cell subline with a diploid level was more susceptible than that...

... specific experimental conditions were peculiar to each cell subline. 1. Pretreatment of cell monolayers with DEAE-dextran increased the diploid level cells receptivity to the *virus*, whereas that of the tetraploid level cells was affected only slightly; pretreatment with dextran sulphate did not affect the receptivity of both cell sublines. 2. Pretreatment of the *virus* with the *polycationic* compound increased significantly its infectivity to the cells of both sublines; pretreatment of the *virus* with *polyanionic* compound decreased significantly its infectivity to the diploid level cells but did not affect that for the tetraploid level cells. 3. Treatment of the agar overlay with the *polycationic* compound induced increase on the plaque size formed in both cell sublines and treatment with the *polyanionic* compound inhibited plaque sizes in both cell sublines. A correlation was not found between the susceptibility of both cell sublines to the infection and the...

14/3,K/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

02639626 78066348 PMID: 201587

Correlation between polyion effect on cell susceptibility to in vitro infection with murine C-type viruses and polyion effect on some membrane-related functions.

Hesse J; Ebbesen P; Kristensen G

Intervirology (SWITZERLAND) 1978, 9 (3) p173-83, ISSN 0300-5526 Journal Code: 0364265

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Polyions were tested for effects on some membrane-related functions. Both *polycations* investigated reduced the negative surface charge of assay cells and enhanced in vitro infectivity of murine C-type viruses, but had no influence on leukemia-*virus*-induced XC cell syncytia formation. Three *polyanions* increased the net outer cell charge, while only one of four inhibited infectivity and two of three impeded syncytia formation. Polyions had a slight, probably...

... had been modified into a granular fluorescence with unstained areas now present. This change correlated with a loss of enhancement of viral infectivity. The only *polyanion* which inhibited viral infectivity had a strong antihyaluronidase activity, and hyaluronidase and Ca++ both increased viral infectivity. It is suggested, therefore, that polyions may in part work on *virus*-cell membrane interactions by influencing membrane enzymes and not necessarily by simply changing the net outer cell surface charge.

14/3,K/17 (Item 17 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

00041650 66077993 PMID: 4285585

The effect of *polyanions* and *polycations* on Mengo *virus*--l cell interaction.

Colter J S; Campbell J B

Annals of the New York Academy of Sciences (UNITED STATES) Jul 30 1965, 130 (1) p383-9, ISSN 0077-8923 Journal Code: 7506858

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The effect of *polyanions* and *polycations* on Mengo *virus*--l cell interaction.

14/3,K/18 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

10904678 BIOSIS NO.: 199799525823

Inducing single-cell suspension of BTI-TN5B1-4 insect cells: II. The effect of sulfated polyanions on baculovirus infection.

AUTHOR: Dee Kennie U; Wood H Alan; Shuler Michael L(a)

AUTHOR ADDRESS: (a)Sch. Chem. Eng., Cornell Univ., 340 Olin Hall, Ithaca, NY 14853-5201**USA

JOURNAL: Biotechnology and Bioengineering 54 (3):p206-220 1997

ISSN: 0006-3592

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Sulfated *polyanions* can be used to rapidly induce and maintain

single-cell suspensions of BTI-TN5B1-4 insect cells, a cell line which clumps in suspension. Elimination of cell clumping results in a significant increase in volumetric yield of the baculovirus expression *vector* system. Sulfated *polyanions*, however, inhibited baculovirus infection of BTI-TN5B1-4. Data from binding studies and fusion assays suggest that the inhibition of infection was not due to the observed reduction in viral attachment rate but to inhibition of viral membrane fusion in the endosome. The three most effective *polyanions* for inducing single cells are dextran sulfate, pentosan sulfate, and polyvinyl sulfate. At concentrations required for single-cell formation, dextran sulfate and pentosan sulfate did...

...infection of 20 plaque-forming units per cell. To bypass this inhibition, polyvinyl sulfate can be removed by resuspending the cells in fresh medium before *virus* addition, and then added back to the cell suspension after a substantial amount of *virus* has been internalized. Alternatively, polyvinyl sulfate can be neutralized with a *polycation* before *virus* addition, and an equivalent amount of polyvinyl sulfate added back after most of the *virus* has been internalized. We present a simple mathematical model of the attachment and entry of baculovirus in BTI-TN5B1-4, which can be used to...

14/3,K/19 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10904677 BIOSIS NO.: 199799525822
Inducing single-cell suspension of BTI-TN5B1-4 insect cells: I. The use of sulfated polyanions to prevent cell aggregation and enhance recombinant protein production.
AUTHOR: Dee Kennie U; Shuler Michael L(a); Wood H Alan
AUTHOR ADDRESS: (a)Sch. Chem. Eng., Cornell Univ., 340 Olin Hall, Ithaca, NY 14853-5201**USA
JOURNAL: Biotechnology and Bioengineering 54 (3):p191-205 1997
ISSN: 0006-3592
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Sulfated *polyanions* have been successfully used to rapidly obtain and maintain stable single-cell suspension of BTI-TN5B1-4 cells, a cell line which has a high intrinsic capacity for recombinant protein production but clumps severely in suspension reducing its effectiveness as a host for foreign protein production with the baculovirus expression *vector* system. The efficacy of inducing single-cell suspension correlated positively with the increase in sulfation of the added *polyanion*. Unsulfated *polyanions*, neutral polymers, *polycations*, disaccharides, and monosaccharides were ineffective in inducing single-cell suspension. Elimination of clumping in suspension culture by adding a dispersing agent can lead to enhanced recombinant protein production. Inducing single-cell suspension with dextran sulfate, a highly sulfated *polyanion*, resulted in a four-fold increase in volumetric yield of the recombinant glycosylated protein, human secreted alkaline phosphatase, and a two-fold increase in volumetric...

14/3,K/20 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10471606 BIOSIS NO.: 199699092751
Interaction of polyions with cell-mimetic species: Physico-chemical and biomedical aspects.
AUTHOR: Kabanov V A(a); Yaroslavov A A; Sukhishvili S A
AUTHOR ADDRESS: (a)Dep. Polymer Sci., Fac. Chem., Moscow State Univ., Moscow 119899**Russia
JOURNAL: Journal of Controlled Release 39 (2-3):p173-189 1996

ISSN: 0168-3659
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: species) by an oppositely charged polyion is demonstrated using a suspension of carboxylated and protein-modified latex particles interacting with the high molecular mass linear *polycations* including those conjugated with the specific protein (alpha-chymotrypsin). The *polycations* are strongly adsorbed on the latex surface. Nevertheless, they are able to migrate between the latex species via occasional interparticle contacts. Finally, the interchanging *polycations* carrying the specific protein are fixed on those latex particles which carry the complementary protein receptor (trypsin inhibitor from soybean). The presence of other proteins...

...such interaction. The resulting effect is considered to mimic a physico-chemical aspect of recognition of target cells by macromolecules combined with relatively small molecular *vector*. Interaction of the target cell membrane with a *polycation* was simulated using negatively charged liposomes. It was found that *polycations* adsorbed on the surface of liquid liposomes can cause a significant charge asymmetry in the lipid bilayer due to transmembrane migration of negatively charged lipids from the inner to outer leaflet. At the same time the liposomal membrane integrity can be retained and adsorbed *polycations* can be replaced from the membrane by recomplexation with *polyanion* species. The established phenomena may be important for understanding the biological effects of *polycations*. Negatively charged liquid liposomes were also used to mimic interaction of cells with DNA-*polycation* and DNA-cationic surfactant complexes used to enhance plasmid DNA translocation. It was found that the complex of DNA with the *polycation* carrying hydrophobic side groups interacted with the liposomes without dissociation and adsorbed on the liposome surface as a whole.

14/3,K/21 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

04252502 BIOSIS NO.: 000077078547
INHIBITORY ACTIVITY OF SURFACTANTS AND POLY ELECTROLYTES AGAINST TOBACCO MOSAIC VIRUS INFECTION
AUTHOR: NAKAJIMA T; TERAOKA T; SHIGEMATSU T; KASUGAI H
AUTHOR ADDRESS: RES. CENT., MITSUBISHI CHEM. INDUSTRY LTD., MIDORI-KU, YOKOHAMA 227, JAPAN.
JOURNAL: J PESTIC SCI (NIHON NOYAKU GAKKAISHI) 8 (4). 1983. 499-504. 1983
CODEN: NNGAD
RECORD TYPE: Abstract
LANGUAGE: JAPANESE

ABSTRACT: Various kinds of surfactants *polyanions* and *polycations* were tested for their inhibitory activities against TMV [tobacco mosaic *virus*] infection on tobacco plants (Nicotiana tabacum L. 'Xanthi-nc' and 'Bright Yellow'). Chemicals were applied on 'Xanthi-nc' before TMV inoculation. Among surfactants tested, .alpha.-olefine sulfonate (AOS) showed high activity without causing phytotoxicity. *Polyanions* other than sodium alginate and sodium polyacrylate (SPA) were less effective. Among *polycations* tested, poly(2-methacryloxyethyl trimethylammonium chloride) (MEOA .cntdot. TMC) showed the highest activity without causing phytotoxicity. MOEA .cntdot. TMC showed higher inhibitory activity against TMV...

14/3,K/22 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

03502362 BIOSIS NO.: 0[redacted]73005442
EFFECTS OF HIGH MOLECULAR WEIGHT POLY CATION AND POLY ANION IN THE MECHANICAL INOCULATION OF TOBACCO MOSAIC VIRUS
AUTHOR: KAJITA S; MATSUI C
AUTHOR ADDRESS: PLANT PATHOL. LAB., FAC. AGRIC., NAGOYA UNIV.
JOURNAL: VIRUS (TOKYO) 31 (1). 1981. 33-40. 1981
FULL JOURNAL NAME: VIRUS (Tokyo)
CODEN: UIRUA
RECORD TYPE: Abstract
LANGUAGE: JAPANESE

ABSTRACT: Primary leaves of bean were rubbed with mixture of tobacco mosaic *virus* (TMV) and poly-L-lysine or dextran sulfate. Addition of poly-L-lysine to the inoculumsinoculum solution greately reduced the number of local lesions formed...

...increased the number of local lesions. A function of poly-L-lysine is to induce aggregation of TMV by neutralization of the negative charge on *virus* particles. Aggregation of inoculum viruses reduced efficiency of infection in the mechanical inoculation. TMV aggregates induced by poly-L-lysine were dissolved by addition of...
...lysine. However, 10-fold volume of dextran sulfate was rquired for full recovery of efficiency of infection of the inoculum. The effects of high MW *polycation* and *polyanion* in the mechanical inoculation of leaf tissues were apparently opposed to those in the protoplast system, and endocytic uptake is hardly a common mechanism of *virus* entry in the mechanical inoculation of leaf tissues.

14/3,K/23 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

03335627 BIOSIS NO.: 000072063731
PHYSICAL FACTORS THAT AFFECT IN-VITRO AUTOGRAPHA-CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS INFECTION
AUTHOR: DOUGHERTY E M; WEINER R M; VAUGHN J L; REICHELDERFER C F
AUTHOR ADDRESS: U.S. DEP. OF AGRICULTURE, SCI. AND EDUCATION ADMINISTRATION, AGRICULTURAL RES., INSECT PATHOL. LAB., BELTSVILLE, MARYLAND 20705.
JOURNAL: APPL ENVIRON MICROBIOL 41 (5). 1981. 1166-1172. 1981
FULL JOURNAL NAME: Applied and Environmental Microbiology
CODEN: AEMID
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Of the physical parameters tested for in vitro baculovirus infection (i.e., Autographa californica nuclear polyhedrosis *virus* of Trichoplusia ni minced adult ovary TN-368 cells)multiplicity of infection was most important in governing percent cell infection. Most plaques formed within the first 5 min of incubation. Efficiency of infection was low, and the *virus* titer did not diminish during prolonged incubation. Efficiency of infection improved markedly when cells or *virus* were preincubated with selected *polyanions* and *polycations*. Precise regulation of the pH, osmotic pressure and ionic composition of the cell culture medium also promoted maximum in vivo infection.

14/3,K/24 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

02386375 BIOSIS NO.: 000065043411
CORRELATION BETWEEN POLY ION EFFECT ON CELL SUSCEPTIBILITY TO IN-VITRO INFECTION WITH MURINE C TYPE VIRUSES AND POLY ION EFFECT ON SOME MEMBRANE RELATED FUNCTIONS
AUTHOR: HESSE J; EBBESEN P; KRISTENSEN G

AUTHOR ADDRESS: INST. ME[redacted]MICROBIOL., UNIV. COPENH., 22 [redacted]IANE MARIES VEJ, DK-2100 COPENHAGEN O, DEN.
JOURNAL: INTERVIROLOGY 9 (3). 1978 173-183. 1978
FULL JOURNAL NAME: Intervirology
CODEN: IVRYA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Polyions were tested for effects on some membrane-related functions. Both *polycations* investigated reduced the negative surface charge of assay [rat kidney and mouse embryo] cells and enhanced in vitro infectivity of murine C-type viruses [rat sarcoma], but had no influence on leukemia-*virus*-induced [Rous sarcoma *virus* and murine leukemia *virus*] XC cell syncytia formation. Three *polyanions* increased the net outer cell charge, while only 1 of 4 inhibited infectivity and 2 of 3 impeded syncytia formation. Polyions had a slight, probably...
...later were modified into a granular fluorescence with unstained areas now present. This change correlated with a loss of enhancement of viral infectivity. The only *polyanion* which inhibited viral infectivity had a strong antihyaluronidase activity, and hyaluronidase and Ca2+ both increased viral infectivity. Polyions may in part work on *virus*-cell membrane interactions by influencing membrane enzymes and not necessarily by simply changing the net outer cell surface charge.

14/3,K/25 (Item 1 from file: 73)

05295899 EMBASE No: 1993063984
Effect of polyions on the infectivity of SA-11 rotavirus in LCC-MK2 cells
Superti F.; Marziano M.L.; Tinari A.; Donelli G.
Department of Ultrastructures, Istituto Superiore di Sanita, Viale Regina Elena 299,00161 Rome Italy
Comparative Immunology, Microbiology and Infectious Diseases (COMP. IMMUNOL. MICROBIOL. INFECT. DIS.) (United Kingdom) 1993, 16/1 (55-62)
CODEN: CIMID ISSN: 0147-9571
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH; FRENCH

...viral attachment. When added during the viral attachment step, polymers having positive charge (protamine, protamine sulphate, DEAE dextran, histone and poly-L-lysine hydrobromide) enhanced *virus* infection whereas those having negative charge (mucin, heparin, heparan sulphate, alpha-1-acid glycoprotein and dextran sulphate) inhibited the viral replication. The effect of *polyanions* on SA-11 rotavirus and on cell membrane receptors has also been examined. Results obtained indicated that while mucin and alpha-1-acid glycoprotein act directly on *virus* particles, the target of heparin, heparan sulphate and dextran sulphate is the host cell membrane.

14/3,K/26 (Item 2 from file: 73)

01449381 EMBASE No: 1979170333
Inhibition of herpes simplex virus Saimiri with polyions
Ebbesen P.; Ablashi D.; Vestergaard B.F.; et al.
Inst. Med. Microbiol., Univ. 2100 Copenhagen Denmark
Microbiologica (MICROBIOLOGICA) (Italy) 1979, 2/2 (191-195)
CODEN: MIBLD
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH

In vitro infection with herpes simplex *virus* (HVS) is inhibited both by the positively charged DEAE-dextran *polycation* and by the negatively

charged dextran-sulphate [redacted]lyanion*. While HSV types 1 an[redacted] are equally affected by DEAE-dextran, the HSV type 2 is more inhibited by dextran sulphate than type 1. In vitro infection with herpesvirus Saimiri (HVS) can be enhanced by the *polycations* DEAE-dextran and polybrene and inhibited by the *polyanions* dextran sulphate and heparin.
?ds

Set	Items	Description
S1	4	(COACERVATE (W) MICROSPHERE?)
S2	3	RD (unique items)
S3	4	(COACERVATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)
S4	3	RD (unique items)
S5	4	(COACERVATE) AND (VECTOR OR VIRUS OR ADENOVIRUS)
S6	3	RD (unique items)
S7	0	S6NOT S4
S8	4	(GELATIN AND ALGINATE) (S) (VECTOR OR VIURS OR ADENOVIRUS)
S9	2	RD (unique items)
S10	64	(POLYCATION? AND POLYANION?) (S) (VECTOR OR VIRUS OR ADENO-VIRUS)
S11	0	S10 AND (MICROSPHERE?)
S12	0	S10 AND (ENCAPSULATED OR ENCAPSULATE)
S13	32	RD S10 (unique items)
S14	26	S13 NOT PY>1998
S15	0	S14 AND (GENE (W) DELIVERY)

?s (gelatin and alginate) (s) (vector or virus or adenovirus)

	31878	GELATIN
	12647	ALGINATE
	211153	VECTOR
	1201225	VIRUS
	64465	ADENOVIRUS
S16	6	(GELATIN AND ALGINATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)

?rd
...completed examining records

S17	4	RD (unique items)

?t s17/3,k/all

17/3,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

15172425 22696682 PMID: 12812957

Alginate for endovascular treatment of aneurysms and local growth factor delivery.

Raymond Jean; Metcalfe Annick; Desfaits Anne-Cecile; Ribourtout Edith; Salazkin Igor; Gilmartin Kevin; Embry Gill; Boock Robert J
Interventional Neuroradiology Laboratory, CHUM Research Center, Notre-Dame Hospital, 1560 Sherbrooke East, Suite M-8203, Montreal, Quebec, Canada H2L 4M1.

AJNR. American journal of neuroradiology (United States) Jun-Jul 2003, 24 (6) p1214-21, ISSN 0195-6108 Journal Code: 8003708
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: In Process

BACKGROUND AND PURPOSE: Coil embolization is safe and effective but may be followed by aneurysm recurrence. Our purpose was to explore the use of *alginate* as a new embolic agent that could deliver growth factors and improve results of endovascular treatment of aneurysms. METHODS: We first assessed the potential of *alginate* as a *vector* for growth factor delivery by using in vitro binding and elution studies. Lateral wall (n = 68) and bifurcation (n = 4) aneurysms were then constructed in six pigs and 36 dogs. We explored iodine-125 transforming growth factor-beta(1) in vivo *alginate* delivery in 16 canine aneurysms. We next assessed the effects of adding *alginate* to *gelatin* sponges on angiographic and pathologic results at 3 weeks (n = 4 each) in an established model used for the study

of recanalization and recurrence. We then explored techniques to control endovascular *alginate* delivery without protection (n = 4), with the protection of a balloon (n = 4), and with the protection of a single coil (n = 12) at the aneurysm neck in 12 porcine aneurysms, four canine lateral wall aneurysms, and four canine bifurcation aneurysms. The stability of cross-linked *alginate* was studied after intraoperative injections in eight aneurysms. Finally, to determine the value of the material with or without growth factor in promoting aneurysm healing, we compared angiographic results and neointima formation 3 weeks after intraoperative embolization of canine lateral wall aneurysms with *alginate* blocks with or without platelet-derived growth factor-BB or transforming growth factor-beta(1) (n = 5 each). RESULTS: Growth factors rapidly eluted from *alginate* in vitro and in vivo. *Alginate* coating of sponges led to improved angiographic results and thick neointima formation. Intraoperative *alginate* block embolization did not lead to recurrence, and growth factors delivered with *alginate* did not show added benefits. Endovascular *alginate* embolization was complicated by carotid emboli, and the polymer was unstable once injected, causing delayed neurologic deficits. CONCLUSION: Growth factor delivery can be performed with *alginate*, but formulation changes and improved endovascular control are necessary before contemplating its use in intracranial aneurysms.

17/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11771995 99210253 PMID: 10195878
Coacervate microspheres as carriers of recombinant adenoviruses.
Kalyanasundaram S; Feinstein S; Nicholson J P; Leong K W; Garver R I
Department of Biomedical Engineering, Johns Hopkins University, Baltimore, Maryland 21205, USA.
Cancer gene therapy (UNITED STATES) Mar-Apr 1999, 6 (2) p107-12, ISSN 0929-1903 Journal Code: 9432230
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

... of which limit the efficiency of target tissue infection. As a first step toward overcoming these limitations, rAds were encapsulated in coacervate microspheres comprised of *gelatin* and *alginate* followed by stabilization with calcium ions. Ultrastructural evaluation showed that the microspheres formed in this manner were 0.8-10 microM in diameter, with viruses evenly distributed. The microspheres achieved a sustained release of *adenovirus* with a nominal loss of bioactivity. The pattern of release and the total amount of *virus* released was modified by changes in microsphere formulation. Administration of the *adenovirus*-containing microspheres to human tumor nodules engrafted in mice showed that the viral transgene was transferred to the tumor cells. It is concluded that coacervate...

17/3,K/3 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

14303238 BIOSIS NO.: 200300297267
Microencapsulation: A strategy for formulation of inoculum.
AUTHOR: Winder R S(a); Wheeler J J; Conder N; Otvos I S; Nevill R; Duan L
AUTHOR ADDRESS: (a)Canadian Forest Service, Pacific Forestry Centre, Natural Resources Canada, Victoria, BC, V8Z 1M5, Canada**Canada E-Mail: rwinder@pfc.cfs.nrcan.gc.ca
JOURNAL: Biocontrol Science and Technology 13 (2):p155-169 March 2003 ~~2003~~
MEDIUM: print
ISSN: 0958-3157
DOCUMENT TYPE: Article

RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A non-toxic phase separation method was developed for microencapsulation of inoculum used in biological control. Aqueous sodium *alginate* or *gelatin* and agar was mixed with inocula of various biopesticides and emulsified in a mixture of corn oil, n-hexadecane, and lecithin. *Gelatin* and agar globules gelled in the emulsion; *alginate* globules gelled after settling into a lower phase of aqueous CaCl2. A layer of gelatinous material thus surrounded the inoculum as 'capsules'. Mixing with n-hexadecane reduced the specific gravity and surface tension of the oil, allowing aqueous extraction of the capsules. Successful extraction of *alginate* capsules depended upon lecithin (> 0.17%), n-hexadecane (> 30%), and CaCl2 (> 0.01 M) concentrations. *Alginate* -encapsulated macroconidia of Fusarium avenaceum caused 23 +- 3% leaf area damage to seedlings of marsh reed grass, versus 4 +- 3% for unformulated controls. In green foxtail seedlings, *gelatin* and agar-encapsulated conidia of Bipolaris sorokiniana caused 21.3 vs. 7.9 lesions per plant for encapsulated versus unformulated conidia. Mortality of Douglas-fir tussock moth larvae caused by a nuclear polyhedrosis *virus* was delayed when 23 polyhedral inclusion bodies (PIB) were incorporated into *alginate* capsules, but it proceeded normally for 2.3 PIB/ capsule, where efficacy was also higher versus positive controls. Microencapsulation enhances the activity of biological control...

17/3,K/4 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

01949449 BIOSIS NO.: 000062039550
SEROLOGICAL STUDIES OF POTATO VIRUS X POTATO VIRUS Y POTATO VIRUS A AND POTATO AUCUBA MOSAIC VIRUS PART 2 PREPARATION OF DIAGNOSTIC ANTI SERA
AUTHOR: GNUTOVA R V; KRYLOV A V
JOURNAL: ACTA PHYTOPATHOL ACAD SCI HUNG 10 (3-4). 1975 (RECD 1976) 195-201. 1975
FULL JOURNAL NAME: Acta Phytopathologica Academiae Scientiarum Hungaricae
CODEN: APYPB
RECORD TYPE: Abstract

ABSTRACT: Relatively pure *virus* preparations were used as antigens. The methods used to purify and concentrate the viruses gave antisera with high antibody content (titer 1:512-1:4096...

...combined scheme of animal immunization (i.v. and i.m. injections involving an adjuvant, i.e., mixture of different volumes of 1% solutions of sodium *alginate* and *gelatin*) was considerably useful in the preparation of highly active diagnostic sera.
?ds

Set	Items	Description
S1	4	(COACERVATE (W) MICROSPHERE?)
S2	3	RD (unique items)
S3	4	(COACERVATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)
S4	3	RD (unique items)
S5	4	(COACERVATE) AND (VECTOR OR VIRUS OR ADENOVIRUS)
S6	3	RD (unique items)
S7	0	S6NOT S4
S8	4	(GELATIN AND ALGINATE) (S) (VECTOR OR VIURS OR ADENOVIRUS)
S9	2	RD (unique items)
S10	64	(POLYCATION? AND POLYANION?) (S) (VECTOR OR VIRUS OR ADENO-VIRUS)
S11	0	S10 AND (MICROSPHERE?)
S12	0	S10 AND (ENCAPSULATED OR ENCAPSULATE)
S13	32	RD S10 (unique items)
S14	26	S13 NOT PY>1998
S15	0	S14 AND (GENE (W) DELIVERY)

S16 5 (GELATIN [redacted] ALGINATE) (S) (VECTOR OR VIRU[redacted]R ADENOVIRUS)
S17 4 RD (unique items)
?s (gelatin or alginate) and (vector or virus or adenovirus)
31878 GELATIN
12647 ALGINATE
211153 VECTOR
1201225 VIRUS
64465 ADENOVIRUS
S18 1121 (GELATIN OR ALGINATE) AND (VECTOR OR VIRUS OR ADENOVIRUS)
?s s18 and (microsphere?)
1121 S18
46392 MICROSPHERE?
S19 39 S18 AND (MICROSPHERE?)
?rd
...completed examining records
S20 24 RD (unique items)
?s s20 not s14
24 S20
26 S14
S21 24 S20 NOT S14
?s s20 not py>1998
24 S20
6873407 PY>1998
S22 10 S20 NOT PY>1998
?t s22/3,k/all

22/3,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10831472 97182526 PMID: 9030665
Leishmania mexicana: binding of promastigotes to type I collagen.
Lira R; Rosales-Encina J L; Arguello C
Department of Experimental Pathology, Center for Research and Advanced Studies, National Polytechnical Institute, Mexico, DF.
Experimental parasitology (UNITED STATES) Feb 1997, 85 (2) p149-57, ISSN 0014-4894 Journal Code: 0370713
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

During leishmania infection, parasites are inoculated to the human host through the bite of a sandfly *vector* into the dermis, where they first interact with tissue components, cells and extracellular matrix molecules. Since collagen is the most abundant component of the skin...

... parasite surface. The interaction of promastigotes with type I collagen was dose dependent and saturable and was competitively and specifically inhibited with increasing concentrations of *gelatin* . Biotin-labeled parasite surface molecules were able to associate with both denatured collagen from microcarriers and native type I collagen from bovine kidney. It is...
; Biotin; Frozen Sections; Leishmania mexicana--ultrastructure--UL; Mice; Microscopy, Electron; Microscopy, Electron, Scanning; *Microspheres*; Skin --chemistry--CH; Skin--metabolism--ME; Skin--ultrastructure--UL

22/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07121766 91362903 PMID: 1367551
Immobilization of microsomes into *alginate* beads is a convenient method for producing glucuronides from drugs.
Haumont M; Magdalou J; Ziegler J C; Bidault R; Siest J P; Siest G
Centre du Medicament, U.R.A. CNRS no. 597, Nancy, France.

Applied microbiology [redacted]d biotechnology (GERMANY) J[redacted] 1991, 35 (4) p440-6, ISSN 0175-7598 Journal Code: 8406612
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Immobilization of microsomes into *alginate* beads is a convenient method for producing glucuronides from drugs.

... diphosphate (UDP)-glucuronosyltransferase has been investigated. Of all the immobilization methods used (covalent binding, adsorption by ionic or hydrophobic interactions), only entrapment of microsomes into *alginate* beads in the presence of polyethyleneimine was effective in producing high glucuronidation rates, thus leading to the formation of large amounts of metabolites. The performance of the bioreactor was optimized with the drug 3'-azido-3'-deoxythymidine (AZT), active against the human immunodeficiency *virus* , as a model substrate of UDP-glucuronosyltransferase. Calcium (12 mM) could optimally improve the stability of microsomes entrapped in *alginate* beads. Upon immobilization, enzyme activation occurred, leading to a fivefold increase in specific activity. The determination of apparent Km and Vmax revealed that AZT was...

; Detergents; Gels; Kinetics; Lysophosphatidylcholines; Microsomes, Liver --chemistry--CH; *Microspheres*; Particle Size; Rats; Rats, Inbred Strains; Zidovudine--chemistry--CH

22/3,K/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07117503 91358567 PMID: 1885668

Cellular invasion into matrix beads: localization of beta 1 integrins and fibronectin to the invadopodia.

Mueller S C; Chen W T
Department of Anatomy and Cell Biology, Georgetown University School of Medicine, Washington, DC 20007.

Journal of cell science (ENGLAND) Jun 1991, 99 (Pt 2) p213-25, ISSN 0021-9533 Journal Code: 0052457
Contract/Grant No.: R01 CA-39077; CA; NCI; R01 HL-33711; HL; NHLBI
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

We have examined the contribution of adhesion mechanisms to cell invasiveness by growing chicken embryo fibroblasts (CEF) or Rous sarcoma *virus*-transformed cells (RSVCEF) on fibronectin-coated crosslinked *gelatin* beads (FN-beads). RSVCEF attached more readily and spread more rapidly on FN-beads than CEF, suggesting an increase in the adhesion-related motility of...

; Cell Division; Cell Line, Transformed; Cells, Cultured; Chick Embryo; Fibroblasts--cytology--CY; Fluorescent Antibody Technique; *Microspheres*; Phagocytosis

22/3,K/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05903224 88257565 PMID: 2838531

Comparison of assays for antibody to HTLVI.

White P M
Virus Reference Laboratory, Central Public Health Laboratory, Colindale, London.

Journal of clinical pathology (ENGLAND) Jun 1988, 41 (6) p700-2, ISSN 0021-9746 Journal Code: 0376601
Document type: Journal Article

Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Indirect immunofluorescence, competitive radioimmunoassay, HTLV I-enzyme linked immunosorbent assay and *gelatin* particle agglutination Serodia-ATLA were compared in terms of their ability to detect antibody to human T cell leukaemia *virus* I (HTLV I). The sensitivities were 96.9%, 92%, 97.0%, and 100%, respectively, and the specificities 99.3%, 98.9%, 98.6%, and 96...
; Agglutination Tests; Enzyme-Linked Immunosorbent Assay; Fluorescent Antibody Technique; HIV Antibodies; *Microspheres*; Radioimmunoassay

22/3,K/5 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10007730 BIOSIS NO.: 199598462648
Production of *alginate* beads by emulsification/internal gelation. II. Physicochemistry.
AUTHOR: Poncelet D(a); Poncelet De Smet B; Beaulieu C; Huguet M L; Fournier A; Neufeld R J
AUTHOR ADDRESS: (a)INRS-Sante, Univ. Quebec, 245 Hymus Blvd., Pointe-Clarie, PQ H9R 1G6**Canada
JOURNAL: Applied Microbiology and Biotechnology 43 (4):p644-650 1995
ISSN: 0175-7598
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Production of *alginate* beads by emulsification/internal gelation. II. Physicochemistry.

ABSTRACT: *Alginate* *microspheres* were produced by emulsification/internal gelation of *alginate* sol dispersed within vegetable oil. Gelification was initiated within the *alginate* sol by a reduction in pH (7.5 to 6.5), releasing calcium from an insoluble complex. Smooth, spherical beads with the narrowest size dispersion were obtained when using low-guluronic-acid and low-viscosity *alginate* and a carbonate complex as the calcium *vector*. A more finely dispersed form of the complexed calcium within the *alginate* sol promotes a more homogeneous gelification. *Microsphere* mean diameters ranging from 50 mu-m to 1000 mu-m were obtained with standard deviations ranging from 35% to 45% of the mean.
MISCELLANEOUS TERMS: *ALGINATE* SOL...

...*MICROSPHERE* MEAN DIAMETERS

22/3,K/6 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09226988 BIOSIS NO.: 199497235358
***Gelatin* *microspheres* as a new approach for the controlled delivery of synthetic oligonucleotides and PCR-generated DNA fragments.**
AUTHOR: Cortesi Rita; Esposito Elisabetta; Menegatti Enea; Gambari Roberto; Nastruzzi Claudio(a)
AUTHOR ADDRESS: (a)Dep. Pharmaceutical Sci., Ferrara Univ., Via Fossato di Mortara 19, I-44100 Ferrara**Italy
JOURNAL: International Journal of Pharmaceutics (Amsterdam) 105 (2):p 181-186 1994
ISSN: 0378-5173
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

***Gelatin* *microspheres* as a new approach for the controlled delivery of synthetic oligonucleotides and PCR-generated DNA fragments.**

ABSTRACT: The present paper reports the preparation and characterization of *gelatin* *microspheres* containing (a) a 44-mer single-stranded synthetic oligonucleotide, complementary to the HLA-DRA gene (ssDNA-44) and (b) a double-stranded fragment, 144 bp in length, prepared by the polymerase chain reaction (PCR) mimicking a region of the HIV-1 LTR (dsDNA-144). Spherical *gelatin* *microspheres* were obtained by a coacervation method, showing a high percentage of encapsulation yields (over 85%). Size distribution analysis of the *microspheres* produced resulted in an average diameter of 22 mu-m. In order to analyse the release profiles of both ssDNA-44 and dsDNA-144 from *microspheres*, in vitro studies were carried out by using a flow-through cell method. The chemical stability of dsDNA-144 to the encapsulation procedure steps was in addition demonstrated by PCR amplification of the DNA eluted from the *gelatin* *microspheres*. The reported results indicate that *gelatin* -based *microspheres* offer excellent potential as carrier systems of the in vivo administration of both single- and double-stranded DNA molecules.
DESCRIPTORS:
ORGANISMS: human immunodeficiency *virus*-type 1 (Retroviridae...

22/3,K/7 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

07476621 EMBASE No: 1998389884
Microencapsulation of hepatitis B core antigen for vaccine preparation
Uchida T.; Shiosaki K.; Nakada Y.; Fukada K.; Eda Y.; Tokiyoshi S.; Nagareya N.; Matsuyama K.
T. Uchida, School of Pharmaceutical Sciences, Mukogawa Women's University, 11-68 Koshien 9-Bancho, Nishinomiya City 663-8179 Japan
Pharmaceutical Research (PHARM. RES.) (United States) 1998, 15/11 (1708-1713)
CODEN: PHREE ISSN: 0724-8741
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 17

Purpose. To prepare poly(lactide-co-glycolide)(PLGA) *microspheres* containing recombinant hepatitis B core antigen (HBcAg; Mw = 3,600,000) by a w/o/w emulsion/solvent evaporation method and evaluate the possibility of ...

...Various additives had been incorporated in the internal aqueous phase during the process of microencapsulating HBcAg, HBcAg antigenicity in the medium extracted from the prepared *microspheres* were measured by ELISA. Shape confirmation of the HBcAg antigen was performed by a sucrose gradient velocity centrifugal technique. For in vivo study, prepared *microspheres* were administered subcutaneously to Balb/C mice, and the serum IgG level was determined by ELISA. Results. The inactivation of HBcAg by methylene chloride was dramatically reduced by the addition of *gelatin* (4-8% (w/v)) to the internal aqueous phase during the preparation. Further improvement of the loading efficiency to almost 61% resulted with cooling (4degreeC). The prepared *microspheres* (4.27 mum +/- 1.23 mum) containing 0.15% HBcAg displayed burst release (50-60% within 2 days). In subcutaneous inoculation, the adjuvant effect of PLGA *microspheres* was almost the same as that of the complete Freund's adjuvant. Whereas oral inoculation using the *microspheres* was not effective. Conclusions. The pH of the added *gelatin* seemed to be the key to the stabilization of HBcAg from various stability tests and CD spectrum study. Finally, the possibility of using this system...
DRUG DESCRIPTORS:
freund adjuvant--pharmaceutics--pr; *microsphere*--pharmaceutics--pr; immunoglobulin g--endogenous compound--ec; polyglactin--pharmaceutics--pr;

polyvinyl alcohol--pharma[redacted]tics--pr
MEDICAL DESCRIPTORS:
virus core; sustained drug release; drug stability; drug antigenicity; antibody response; hepatitis b *virus*; nonhuman; female; mouse; animal experiment; controlled study; oral drug administration; subcutaneous drug administration; article; priority journal

22/3,K/8 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

07246231 EMBASE No: 1998131454
Potential efficacy of *gelatin* *microspheres* as a new adjuvant for oral vaccination
Nakamura M.; Yamashita S.; Tsume Y.; Nadai T.; Sezaki H.; Kohno T.; Tabata Y.; Ikada Y.
M. Nakamura, Faculty of Pharmaceutical Sciences, Setsunan University, Nagaotoge-cho, Hirakata, Osaka 573-01 Japan
S.T.P. Pharma Sciences (STP PHARMA SCI.) (France) 1998, 8/1 (67-73)
CODEN: STSSE ISSN: 1157-1489
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: FRENCH
NUMBER OF REFERENCES: 24

Potential efficacy of *gelatin* *microspheres* as a new adjuvant for oral vaccination

...entry of infectious agents from the mucosal surface into the body. In order to stimulate the mucosal immune response, microparticle systems, such as liposomes or *microspheres* in which antigens are incorporated, have been used as an immune adjuvant in oral vaccination. In this report, *gelatin* *microspheres* were prepared by means of crosslinking with glutaraldehyde and their effects on the mucosal immune response were studied. It was proved that the stability of *gelatin* *microspheres* against the enzymatic degradation and the release profile of ingredients can be regulated by changing the concentration of *gelatin* and glutaraldehyde added. Ovalbumin was used as a model antigen and incorporated into *gelatin* *microspheres* having an adequate property for oral immunization. The oral ingestion of *gelatin* *microspheres* incorporating ovalbumin markedly enhanced the anti-ovalbumin/IgA levels in the intestinal fluid, suggesting the strong adjuvant effect of *gelatin* *microspheres*. This adjuvant effect is derived from the functions of *gelatin* *microspheres* as a carrier in the gastro-intestinal tract to deliver antigens to the immune-inductive site (Peyer's patches), protecting them from the enzymatic degradation. *Gelatin* *microspheres* also proved to evoke the immune response at the genito-urinary mucosa, suggesting the possibility to develop the oral vaccine against the sexual transmission of human immunodeficency *virus*. In contrast, liposomes, the well-known microparticles having an adjuvant potency, failed to stimulate the secretion of IgA from the genito- urinary mucosa by oral ingestion. These results clearly showed the high ability of *gelatin* *microspheres* as an adjuvant in oral vaccine over liposomes.
DRUG DESCRIPTORS:
**gelatin*; **microsphere*; *ovalbumin--drug administration--ad; *ovalbumin --pharmaceutics--pr; *immunological adjuvant; *immunoglobulin a--endogenous compound--ec; *liposome
MEDICAL DESCRIPTORS:
intestine fluid; peyer patch; urogenital system; mucosa; human immunodeficiency *virus*; nonhuman; mouse; animal experiment; animal model; controlled study; animal tissue; oral drug administration; article
CAS REGISTRY NO.: 9000-70-8 (*gelatin*); 77466-29-6 (ovalbumin); 111-30-8
...

22/3,K/9 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

06598127 EMBASE No: 1996262833

Comparative analysis of oral delivery systems for live rotavirus vaccines

Duncan J.D.; Wang P.X.; Harrington C.M.; Schafer D.P.; Matsuoka Y.; Mestecky J.F., Compans R.W.; Novak M.J.

Southern Research Institute, Pharmaceutical Division, 2000 9th Avenue South,Birmingham, AL 35205 United States

Journal of Controlled Release (J. CONTROL. RELEASE) (Netherlands) 1996, 41/3 (237-247)

CODEN: JCREE ISSN: 0168-3659

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...of infectivity was estimated during incorporation into the delivery systems, and during the subsequent processing steps in the preparation of poly(DL-lactide-co-glycolide) *microspheres*, *alginate* microcapsules, spray-coated non-pareil seeds, granules, and tablets. Incorporation of live rotavirus into DL-PLG *microspheres* or *alginate* microcapsules, as well as the application to the surface of non-pareil seeds resulted in a complete or significant loss of rotavirus infectivity. In contrast, stabilization of the rotavirus vaccine with an excipient blend of cellulose, starch, sucrose and *gelatin* (30:30:30:10), followed by incorporation into granules or tablets, produced outstanding results with only minimal losses of infectivity. Of these two delivery systems...

DRUG DESCRIPTORS:
alginic acid--drug comparison--cm; cellulose--drug combination--cb; *gelatin*--drug combination--cb; polyglactin--drug comparison--cm; starch --drug combination--cb; sucrose--drug combination--cb

MEDICAL DESCRIPTORS:
article; drug stability; microencapsulation; nonhuman; priority journal; *virus* culture; drug comparison; tablet

...CAS REGISTRY NO.: 9004-34-6 (cellulose); 9000-70-8 (*gelatin*); 26780-50-7...

22/3,K/10 (Item 4 from file: 73)

DIALOG(R)File 73:EMBASE

05766708 EMBASE No: 1994174349

Drug targeting into the central nervous system by stereotactic implantation of biodegradable *microspheres*

Menei P.; Benoit J.-P.; Boisdron-Celle M.; Fournier D.; Mercier P.; Guy G.; Vick N.A.; Brem H.

Service de Neurochirurgie, CHU d'Angers, 4 rue Larrey,49033 Angers Cedex 01 France

Neurosurgery (NEUROSURGERY) (United States) 1994, 34/6 (1058-1064)

CODEN: NRSRD ISSN: 0148-396X

DOCUMENT TYPE: Journal; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Drug targeting into the central nervous system by stereotactic implantation of biodegradable *microspheres*

CONTROLLED DRUG RELEASE in the central nervous system through an implantable polymeric *vector* has been developed in recent years. For this purpose, different polymeric devices composed primarily of synthetic biocompatible and biodegradable polymers have been investigated. The first ...

DRUG DESCRIPTORS:
**microsphere*; *bethanechol--pharmaceutics--pr; *bethanechol--pharmacology --pd; *bethanechol--drug therapy--dt; *carmustine; *cytokine; *fluorouracil ; *nerve growth factor--pharmacokinetics--pk; *polymer; *tumor necrosis factor
albumin; antiinflammatory agent; antimitotic agent; collagen; corticosteroid; cyanoacrylate derivative; digoxin; dimeticone; dopamine;

drug carrier, ethylene vi[redacted] acetate copolymer; *gelatin* [redacted]droxyacid;
local anesthetic agent, neuroleptic agent; polyaminoacid; polyanhydride;
polyester; polyglactin; silastic
...CAS REGISTRY NO.: 62-31-7 (dopamine); 24937-78-8 (ethylene vinyl acetate
copolymer); 9000-70-8 (*gelatin*); 26780-50-7...
?ds

Set	Items	Description
S1	4	(COACERVATE (W) MICROSPHERE?)
S2	3	RD (unique items)
S3	4	(COACERVATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)
S4	3	RD (unique items)
S5	4	(COACERVATE) AND (VECTOR OR VIRUS OR ADENOVIRUS)
S6	3	RD (unique items)
S7	0	S6NOT S4
S8	4	(GELATIN AND ALGINATE) (S) (VECTOR OR VIURS OR ADENOVIRUS)
S9	2	RD (unique items)
S10	64	(POLYCATION? AND POLYANION?) (S) (VECTOR OR VIRUS OR ADENO-VIRUS)
S11	0	S10 AND (MICROSPHERE?)
S12	0	S10 AND (ENCAPSULATED OR ENCAPSULATE)
S13	32	RD S10 (unique items)
S14	26	S13 NOT PY>1998
S15	0	S14 AND (GENE (W) DELIVERY)
S16	6	(GELATIN AND ALGINATE) (S) (VECTOR OR VIRUS OR ADENOVIRUS)
S17	4	RD (unique items)
S18	1121	(GELATIN OR ALGINATE) AND (VECTOR OR VIRUS OR ADENOVIRUS)
S19	39	S18 AND (MICROSPHERE?)
S20	24	RD (unique items)
S21	24	S20 NOT S14
S22	10	S20 NOT PY>1998

?logoff
16sep03 10:05:43 User259876 Session D545.2
$4.72 1.475 DialUnits File155
$5.67 27 Type(s) in Format 3
$5.67 27 Types
$10.39 Estimated cost File155
$8.76 1.565 DialUnits File5
$24.50 14 Type(s) in Format 3
$24.50 14 Types
$33.26 Estimated cost File5
$12.54 1.356 DialUnits File73
$17.85 7 Type(s) in Format 3
$17.85 7 Types
$30.39 Estimated cost File73
OneSearch, 3 files, 4.396 DialUnits FileOS
$3.72 TELNET
$77.76 Estimated cost this search
$78.13 Estimated total session cost 4.490 DialUnits

Status: Signed Off. (17 minutes)